CONFERENCE OF THE EIGHTEEN-NATION COMMITTEE ON DISARMAMENT

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Statement by Ambassador M.A. Husain at the Informal Meeting of the ENDC held on 13 August 1969 to consider the question of a Comprehensive Nuclear Test Ban

1. The delegation of India is strongly in favour of intensive co-operation for international exchange of seismological data, which would facilitate a comprehensive nuclear weapon test ban. The Indian delegation, therefore, welcomes the initiative taken by the delegation of Canada in submitting its working paper (ENDC/251), in which it has proposed that "countries be invited to send a list of the seismograph stations from which they would be ready to supply records on the basis of guaranteed availability of data in the framework of a world exchange of seismic data and provide certain details concerning these stations". The Canadian delegation has also suggested that a request be made by the ENDC to Governments on these lines.

2. I should like today to offer the views of my delegation on certain aspects of the Canadian proposal.

3. Undoubtedly, an effective scheme for the unrestricted exchange of high quality seismic data on a world-wide basis, coupled with centralized means for collating and reducing them for quick and reliable interpretation leading to accurate estimates of location, depth and nature of seismic sources will help to remove to a very great extent, if not fully, the remaining reservations, as to the effectiveness of seismic means for verifying a comprehensive test ban treaty. As was brought out at the SIPRI meetings last year such a step would only be an extension of the principle of international co-operation which has been the main feature of seismological research and development.

4. However, the data exchange required for improving seismic methods of detection and identification, would clearly need to be more elaborate and diversified. It should include (a) the complete, original record of all the phases of the seismogram covering the entire spectrum of earth waves, (b) the exact response characteristics of the sensing and recording instruments, (c) the precise location and configuration of the instruments or the network of instruments deployed for detection, (d) a complete description of the format in which the data is available and (e) an indication of the accuracy of the time information.

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5. A clear idea of the characteristics of instrumentation and recording formats is indispensable for evaluating the requirements of the centralized processing facilities needed to utilize fully the extensive data involved.

6. Equally useful from the point of view of enhancing the reliability of seismic identification of underground explosions would be the following data pertaining to underground tests:

(a) The scheduled time of firing.
(b) Latitude and longitude of test point.
(c) Depth at which the device is emplaced.
(d) Yield.
(e) General topography and geology of the test area.

7. The Canadian proposal is quite in conformity with the stand consistently taken by us, in relation to exchange of seismological data for which our data is freely available. However, the financial implications, and logistic support required for commiting ourselves to such an arrangement will have to be examined carefully.

8. From a purely technical point of view the information sought in document ENDC/251 may be augmented as follows:

(a) (i) Option of Zerox copy of the original records.
(ii) The tine resolution in, say, millimeters per second of each type of record.
(iii) The estimate of precision of the tining system.
(b) (iv) The lay-out drawing of the array, the depth of emplacement of sensors, and topographical and geological features of the array site.
(v) Indication of the type of raw magnetic records whether digital or continuous, as well as the normal period up to which they are retained; the format in which library tapes containing events of a specified type or above a specified magnitude are prepared for long-term preservation.
(vi) Accuracy of the time code.

9. The Department of Atomic Energy of the Government of India operates stations of "b" type only in the form of a medium aperture short period array and some long period instruments in Southern India. With the existing processing facilities, we will not be able to release the original tapes earlier than six months after recording. By this time, they would hardly be useful for the international processing scheme envisaged.

The most convenient method, therefore, for making copies available for exchange would be to take duplicate recordings of both short and long period instruments of our array.

10. In conclusion, Mr. Chairman, I would like to reiterate that the Government of India would have no objection to providing the information required in respect of our Southern Indian station. However, as mentioned earlier, this process would have financial implications, since it would be difficult for us to loan the original magnetic tape containing the information. I should think that a similar problem would be faced by many other countries as well. Should it, therefore, be decided that the ENDC should address a letter to Governments on the lines suggested by the Canadian delegation, an enquiry may also be made whether their countries envisaged any financial implications in meeting the request for information.

11. The Government of India would thus be ready to co-operate actively in any system of seismological data exchange provided it is an effective one based on the equal participation and full co-operation of all concerned.